



Potential of renewable energy resources at remote himalayan communities

A. Sood (1,2) , D. Heinemann (1,2), K. Suselj (1,2)

(1) Forwind, Center for Wind Energy Research and (2) Energy Meteorology Group, Energy and Semiconductor Research, CvO University Oldenburg, Germany (Contact Email: abha.sood@forwind.de)

The renewable autonomous power generation can provide clean electricity to remote Himalayan villages which are decoupled from the national or state electricity grid. Micro Solar-Wind-Hydro and/or organic wastes hybrid systems can be envisaged for diversified generation of 24-hour uninterrupted energy supply, enabling an enhancement in working hours and leading to a greater level of productivity and income. Significant valley winds are available at numerous locations which can be used for power generation. Previous studies have confirmed the ability of high resolution mesoscale models to reproduce thermal flows due to orographic forcing. A systematic high resolution mesoscale (WRF) simulation over the Himalayan region can be used identify cost-effective sites for the wind and solar potential.